CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Rocky Reef Spring Creek Project
Proposed Implementation Date:	3/1/2018
Proponent:	Leland F. Wilson, 29 Rocky Reef Road, Fort Shaw, MT 59443
Location:	That portion of section 36, T21N, R2W owned by the state of Montana
County:	Cascade
Trust:	Common Schools

I. TYPE AND PURPOSE OF ACTION

Stream channel construction and modifications in and along an unnamed spring creek tributary to the Sun River, to restore and enhance degraded fisheries and wetland habitat.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

The project is much larger than the portion occurring on the state Trust lands, and has had previous scoping and review by the Montana FWP, review by the FWP Commission, the County 310 Board, and Army Corps of Engineers (404 permitting).

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

310 permit – Cascade Co. CD
404 Permit – Army Corps of Engineers
Potential 3A Authorization – MT FWP

3. ALTERNATIVES CONSIDERED:

No Action – Allow no restoration actions on the Trust land portions of the project.
The Proposed Actions – issue a Land Use License (LUL) for the construction and revegetation phase of the state land portion of the project. Once the project is completed and vegetation is well established, the LUL would be allowed to expire. (Refer to the attached aerial photos for location number references.)

- The Construction at Points 1,2, and 3 has been completed under the authorization on LUL # 3070982.
- At about point 4, there would be a dam/ weir structure, to regulate for the "pond" area downstream and for the new to be constructed channel which would cross to the north side.
- At about point 5, the full flows would be returned to the existing channel, and continue to confluence with the Sun River a short distance east.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

In the South half of Section 36 there have been significant natural changes to the Sun River course, as well as gradual accretions to the abandoned channel. These changes, along with irrigation withdrawals and livestock grazing have resulted in a wide shallow sediment covered stream bed where once the gravel bed of the Sun River existed. The boundary between and the extent of the state and private lands is indeterminate.

These actions would have no direct, indirect or cumulative adverse effects to the soils or geology in the area.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

Natural upwelling of cold water within the spring creek currently flow through the wide shallow channel, potentially warming above levels preferred by trout species. Flow rates in the wide channels are also low, allowing retention of sediment over the existing underlying gravels.

The proposed actions would narrow and deepen the channels, and create some new channels. The meanders and flow rates would result in pools and riffles, allow for flow rates which would flush sediments allowing for long term maintenance of gravel stream beds, and create a condition where the cold water upwelling decreases overall stream temperatures through the reaches.

These changes are designed to provide an improved effect to water quality.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Other than some potential dust, short term during the construction process, there should be no effects to air quality.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

New channel construction areas would provide sod mats and possibly willow and other shrub transplant stock for other in-channel modifications. Other shrub planting stock may be required to complete the planned revegetation along the finished channels. Some bare soil areas disturbed by the construction process may need seeding with native grass species.

The Land Use License would provide the contractual requirement to ensure that the project disturbances on the state Trust land are completed, including the establishment of vegetation to disturbed areas. Upon completion, the changes proposed are designed to improve vegetation cover along the stream channels and be self sustaining.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

Improving overall aquatic habitat conditions within this spring creek and restoring migratory connectivity with the Sun River is expected to enhance the resident fisheries, including rainbow trout and brown trout. Additionally, restoration of the stream is expected to enhance recruitment of fish to the Sun River. Habitat for riparian

dependent wildlife also would be improved by enhancing the riparian vegetative community along the stream margin. Reaches where the old channel becomes abandoned would remain as off-channel ponds to enhance habitat for waterfowl. *(These statements from the EA completed by the MT FWP, as part of their review for the related Future fisheries involvement in the overall project.)*

From George Liknes, Fisheries Biologist with FWP. "FWP is a partner and has contributed financially to the project through the Future Fisheries Program. ...The project will benefit the fisheries in the spring creek as well as providing public benefits to the Sun River-Missouri River system. Spawning habitat, rearing habitat and a thermal refuge will be created that is not currently accessible to the trout population in the mainstem Sun River. The project should also increase the recreation potential on the private and school trust land. ...The project will have substantial fisheries and angler benefits."

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

The EA completed by FWP indicated no presence of threatened or endangered species on the project area.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

The project sites on the state land (and immediately adjacent private) were field inspected by Pat Rennie, DNRC Archaeologist, his comments were as follows. "The areas of potential effect on state owned land (S1/2SE4SE4NW4 and Government Lot 4: a portion of the SE4 and E2E2SE4SW4) in Section 36, T21N R2W were inventoried to Class III standards. No cultural or paleontological resources were identified. No further archaeological investigative work is recommended."

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The project area is only visible locally and the proposed actions would have no real change to the aesthetics of the area.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

The overall project covers nearly 4 miles of stream channel, mostly on private lands up stream to the west. Being near the downstream end of the project, the actions on the state trust land are critical to the overall success of the project. All construction costs and project supervision are being covered by the proponent (including various cost shared and grant projects as well as the proponent's out-of-pocket expenses). DNRC would experience little workload or demand for services while receiving the benefit of extensive stream restoration work at no expense.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

Montana FWP completed an EA in the spring of 2010, for their involvement under the Future Fisheries Improvement Program. Portions of their review were relied upon in this assessment.

Montana DNRC completed an EA in early 2011 for this project. After various delays, administrative, legal, and regulatory, the project is approximately 75% finished at this time, although the majority of work on lands that

may be claimed by the state of Montana has yet to be completed. This EA is intended to update and supplement the EA produced by MT DNRC dated 1/11/11.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

No adverse effects are indicated.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

No adverse effects are indicated.

The adjacent landowner has converted the irrigation practices on the adjacent fields as part of the overall project.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

Some short term employment during the construction phase. Once completed, the site changes should be self perpetuating.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

No changes would occur due to the project.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

No changes to government services are anticipated.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

There is no local zoning affecting this project.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

The lands in gov't lot 4 are mostly land locked by private lands, but do have contact with the Sun River channel. Recreationists engaged in water related recreational activities (not big game hunting) could legally access this parcel via an approximate 2 mile traverse down and within the ordinary high watermarks of the Sun River, from the bridge on the Fort Shaw road.

The project does not change this access opportunity. The project should improve cold water fisheries within the proposed stream reaches, and in the Sun River itself.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No changes would occur due to the project.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

No changes would occur due to the project.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

No changes would occur due to the project.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The project actions are a net benefit at no direct cost to the Trust. The Land Use License is proposed at a minimum $150/year for the construction and vegetation establishment phase of the project to provide a contract ensuring that disturbances on the state Trust land are revegetated after completion of the work. This period may extend for 3 to 5 years, providing a small income directly to the Trust.

Attachments:

1. Aerial photo (map) of unfinished portion of the project. This map retains the numbering system from the original 2011 DRNC EA for clarity.

EA Checklist Prepared By:	**Name:**	Martin Balukas	**Date:**	1/2/18
	Title:	CLO Trust Land Program Manager		

V. FINDING

25. ALTERNATIVE SELECTED:

I have selected the alternative to issue a Land Use License for the project as proposed.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The entire project, including those portions on the Trust land, are designed to enhance fish habitat in the spring creek and provide for additional recruitment of fish to the Sun River. In reaches where the old channel is cut off by new construction, the off channel ponds would be maintained for waterfowl habitat. These changes will be an overall improvement to the fish and wildlife habitats in the area.

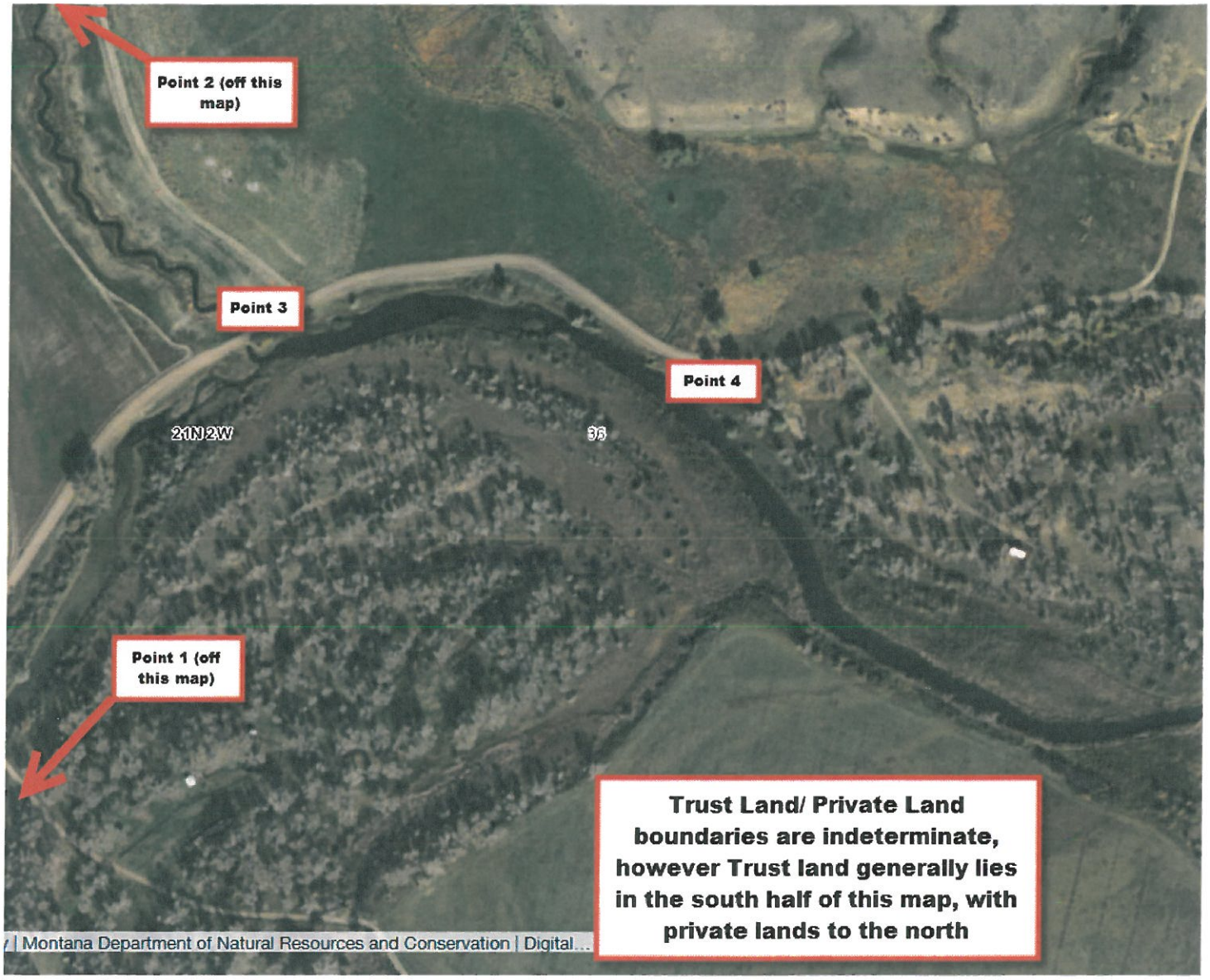
No significant direct, indirect or cumulative adverse effects are anticipated.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ]	EIS	[ ]	More Detailed EA	[x]	No Further Analysis

EA Checklist Approved By:	**Name:**	Andy Burgoyne
	Title:	Helena Unit Manager
Signature:		**Date:** 1/11/18

Section 36, Township 21 North, Range 2 West



The first DNRC EA for this project, the 2011 EA, referenced activities at points 1-5. Since that time activities at points 1,2, and 3 have already occurred and this EA only deals with activities at point 4 and 5. For the sake of clarity these points retain the same numbers as the original EA.